

Businesses Learn to Market Locally On the Global Internet

Newspapers are awash in stories about the global Internet, but for many companies the most important markets are still their local communities—the source of their customers, employees, and services, and of the good will that keeps them in business. Across the Net several ventures are under development to make it easier for companies to establish an Internet presence in their own backyards.

CityNet Express, based in Portland, Ore., is perhaps the most ambitious of several such efforts. CityNet pulls together in one place strictly local information about communities from around the world—information about their governments, school systems, cultural

scene, community life, and the like. This is the place to get information about what's going on in Kobe (Japan), Buffalo (New York), Goettingen (Germany), and Johannesburg (South Africa).

Run by Kevin Altis (see box on page 3), CityNet is a sequel to an Internet project called Virtual Tourist, which consisted of a series of world maps linked to the huge list of servers maintained at the CERN high-energy physics lab in Switzerland, where the Web was created. Virtual Tourist is the creation of Brandon Plewe, a network manager at the University of Buffalo. Plewe is consulting with Altis in designing CityNet's map interface.

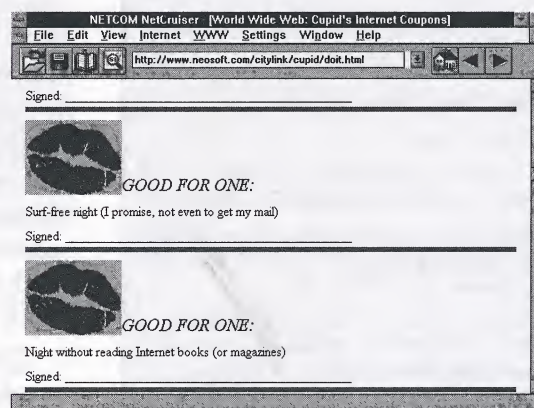
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Marketing with Heart(s) is Carol Blake's Secret

Time and place matter, even in cyberspace. See the story above on CityNet for some insight into the continuing pull of physical community. During the 1994 Christmas season, for example, companies like Sun used the Net both to give to charity and to milk their charity for every drop of publicity (see the January newsletter, page 2). Valentine's Day 1995 presented some novel opportunities on the Net as well.

Blake & Associates is a Louisiana marketing consulting firm that, among other things, helps companies develop public-relations campaigns using both Internet and traditional media.

Its owner, Carol Blake, provides her clients "first-tier marketing"—which, accord-



ing to Blake, means grabbing attention with useful, fun, information-rich sites, not me-too home pages.

(continued on page 9)

In this Issue

Catches of the Month—Good buys

2

Roundup of Web Resources

5

Web World's Excitement

6

Interview with Mosaic Inventor, Marc Andreessen

8

CERN Cedes Key Web Role

9

HTML Primer, Part 1

10

Coming Up...

HTML Primer, Part II

What's Next for Netcom?

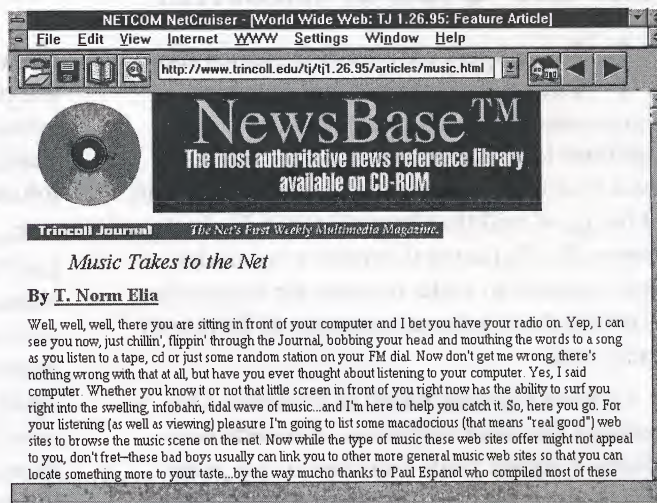
Catches of the Month: Buying into the Net

This month's update pages bring some models for making money on the Internet. It is wise to be aware of these models at a time when newspapers, magazine articles, and statistical surveys carry the negative message: people aren't buying on the Web. There is no failure, however.

In the case of electronic commerce—direct buying and selling—the technologies are not quite ready for prime time, a leading technology hasn't emerged, and neither buyers nor sellers are yet comfortable with the mechanics. For now, Internet marketing is helping companies get positioned for e-commerce. Here are some ways companies are making money on the Internet.

First, some sites are taking advertising. CityNet, spotlighted on page 1 and included in your update pages for Tab 1100, shows how local and travel-related companies can use the Net to reach both local audiences

and tourists. The Wild Dune and HotWired sites, showcased on page 7, are further examples of how information-rich sites can be used to attract traffic and advertisers. Finally, the online version of the Trinity College journal, Trincoll, is now successfully taking advertising (see figure below).



A second model, mentioned here before, is the "exchange." The Global Recycling Network (see the February newsletter, page 1), the Energy Exchange, the Homebuyer's Fair, and IndustryNet (all added to the General Business section this month) show how brokers and market-makers can use the Net to help buyers and sellers find each other more effectively and less expensively than they could otherwise. For now, the actual buying and selling takes place mostly offline.

In the Security section of Tab 1100, you now have entries for the four companies closest to offering technologies in support of direct online transactions. In addition, Netscape is about to be joined by larger players, such as Silicon Graphics and Oracle, in offering World Wide Web software that supports secure transactions.

The Internet (read the Web) is quickly becoming a mass market. The online services are all scurrying to provide full Internet access and to mingle their content with the Internet's, licensing established software such as Netscape and Spry's Air Mosaic to shorten their software-development effort.

Even Fidelity Investment sees gold, having just announced its own Web site, <http://www.fid-inv.com/>. For now, look for quizzes and surveys at this site. You can be sure that Fidelity will be facilitating financial transactions on the Web as soon as it's feasible, secure, and safe. ♦

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President: Richard E. Thompson

Vice President/Publisher: Daphne Musselwhite

Senior Publications Manager: Darla Fera

Editor: David Peal
dpeal@ix.netcom.com
(202) 739-9541

Senior Marketing Manager: Cheryl Nelson-Madden

Production Manager: Connie Barclay

For subscription questions, call (813) 282-8807 or toll-free (800) 879-3169. For editorial questions, call (202) 739-9541.

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Thinking Locally . . .

(continued from page 1)

You can connect to the Virtual Tourist home page directly at <http://wings.buffalo.edu/world/vt2/>. Some of its sites, such as Virtual Tourist-California, remain rich in resources (<http://www.research.digital.com/SRC/virtual-tourist/California.html>).

City Finder

From the CityNet home page (<http://www.city.net/>) you can see lists of regions (continents, really), countries, and cities, and a form-based query tool that lets you go directly to a particular place; from the U.S. page, at the country level, you get a list of states. CityNet presents a consistent interface for linking to specific local resources: Selecting any place (Portland or Sidney, say) brings up a list of the Internet resources for that

Check Your Browser at the Door

CityNet takes good advantage of the Web's capacity for what Kevin Altis calls "self-correction." A script that Altis wrote identifies the Web browser you use to read the CityNet home page (picking up information from the User Agent field). The script then compares your browser to a table of browsers and informs you if a more recent version of your software is available—a version better able to display the pages Altis is creating. Altis says that while there are only 50 browsers available for sale and as freeware, there are more than 800 versions of those browsers (adding up the alpha, beta, and commercial versions). However, 6-7 browsers represent 90 percent of the traffic at his site, and 60 percent of the browsers are Windows. The Browser Checkup site itself is pointed to by at least 50 sites.

place, consistently categorized across cities; clicking the URL takes you to the actual resource.

CityNet does not attempt to bring together all the city resources itself, but invites readers to submit their own "travel, entertainment, government, and community" resources using a Web form. It doesn't endorse the resources it gets this way, and reserves the right not to provide links to them from its site. To incorporate reader-submitted resources into its site, CityNet provides a line of HTML code for submitters to include, at the bottom of their pages, to create a graphical link that will, with a click or two, return you to the CityNet home page—reinforcing the consistent interface.

CityNet Express is visited by people connecting from some 5,300 unique hosts a day—at times, a connection a second!—a rate going up 10-15 percent *a week*. Altis publicizes the site in prominent places: the Yahoo directory; Open Market's Commercial Sites index; and the NCSA, now O'Reilly, What's New page. Through word of mouth, or its equivalent on the Net, CityNet is linked to from some 250 sites, a fact Altis has discovered by writing a special script that can detect the site from which a browser is coming. Like the best Web sites, CityNet solicits feedback via a Web form, receiving 10-20 responses a day.

Community Billboards

What makes a good community site? The "best" sites, Altis says, are the most-visited ones. Some popular CityNet sites are the City of Palo Alto (<http://www.city.palo-alto.ca.us/>), the Paperless Guide to NYC (<http://www.mediabridge.com/nyc/>), Nashville Net (<http://www.Nashville.Net/>), and Hawaii's tourism site (<http://www.visit.hawaii.org/>).

Businesses just learning about Internet marketing have probably heard about the importance of giving away information—to both contribute to the Internet and to attract the attention of potential customers. Kevin Altis has created a rich information resource, and is actively searching for companies to help underwrite it and attract customers' attention to both the resource and companies' presence. Ultimately, he sees CityNet as a powerful tool for connecting local businesses to local markets.

Altis is using the volume statistics to appeal to prospective sponsors. First he is seeking corporate sponsorship for the continental and country-level pages because of the high volume of hits they receive. "There may be some partnering with travel and tourism content providers to provide hotel and tour reservations online as secure transaction mechanisms become more widespread," he says. He plans to charge less than trendy sites such as HotWired and O'Reilly's Global Network Navigator (see box, page 7).

Less expensive will be the advertising at the lower-volume, lowest-level pages—for the communities themselves. What sort of presence will local advertisers get locally? "Assuming you are Bay Area Real Estate Network, we put a link back to your site along with a small graphic or text at the top of the page, so for the Bay Area page you might have something like 'Sponsored this week by the Bay Area Real Estate Network'—a hyperlink back to your site," Altis said.

Another method for drawing attention to advertisers are the North Carolina pages being created by John

(continued on page 4)

Thinking Locally . . .

(continued from page 4)

Ellis (see the figure and the sidebar on furniture shopping, page 5). City and state level pages will initially be priced in the \$100 a month range. But Altis hastens to say that his pricing model is still being worked out.

Free-Nets

The Internet institution that approaches CityNet most closely in concept and audience is the Free-Net. A Free-Net is a community-based network, with roots in the BBS world but extensions in recent years on the Internet.

An essential resource on the Free-Net movement is the Free-Net listing created by Peter Scott of the University of Saskatchewan (<http://duke.usask.ca/~scott/free.html>).

Netrepreneur

With an undergraduate degree in economics, Kevin Altis has worked with computers since 1980. He has made the long march, familiar to many, from CP/M to PCs to Macs to Unix to Windows. In Missouri he ran a BBS and led a Mac user group for three years in the early 80s while programming and consulting, before moving out to Portland, Ore., where he joined Intel as a systems engineer in 1992.

A year and a half later, he cofounded the Internet Technology Development Group at Intel within the Communications Technology Lab. The group's goal was to bring the Internet to the PC, and then make the PC the communications platform for the Net. This was before any vendor bundled TCP/IP as part of the operating system, but "we wanted real Net access to be part of the platform, just like CD-ROM is integral today."

As part of this effort Altis worked on the development of proxy server technology with Lou Montulli (University of Kansas)—primary developer of Lynx, the leading character-based Unix browser—and Ari Luotonen (CERN), who are both at NetScape Communication Corp. now. (A proxy server lets corporate users circumvent a firewall to access the Internet.) Altis left Intel in November 1994 to pursue CityNet and to develop and market his own software tools for managing Web content.

Available by Telnet, Gopher, and increasingly over the Web, Free-Nets usually have separate areas devoted to various community institutions, such as government, arts, and schools. Many Free-Nets grew out of the efforts of local schools to go online.

For Altis, the two problems with Free-Nets are their inability to sustain themselves and their lack of scalability. Many Free-Nets allow local businesses to advertise their existence in bulletin-board fashion, but the absence of appropriate funding limits Free-Nets in the scope and type of information they can make available.

CityLink

A different model for presenting local information on the Internet is USACityLink, hosted by NeoSoft (<http://www.neosoft.com/>), a Houston-based Internet access provider, and created by Carol Blake & Associates (see the related article about Blake's Valentine site, page 1).

CityLink is limited to the U.S., and Carol Blake says she is not about to broaden the focus. USA CityLink takes the traveler's view of city resources, providing lists of sightseeing destinations, restaurants, and the like. (Blake is a marketer, new to the Net, while Altis is a technologist with long experience with the Net culture.)

Blake has created about 50 pages for local chambers of commerce, a service for which she charges, and she also links in diverse local resources. Because levels of community participation on the Net are on the whole still low, there is considerable overlap in the resources made available over CityNet and CityLink (see box on page 5).

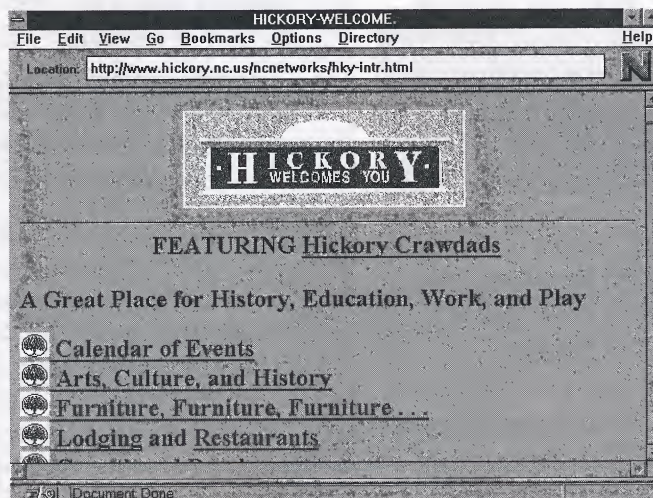
Success for CityNet will depend on easy, inexpensive, and broad access to the Internet. Kevin Altis is optimistic: "[Community] activity will increase as the local phone companies and cable companies and long distance providers get into the game. Government agencies are clearly doing as much as possible to pursue this new medium in an attempt to be more in contact with the populace and reduce costs at the same time. In addition, for small communities, especially those trying to attract tourism and industry this [medium, the Internet] is a great leveler."

The moral of the story may well be—if you have a business and don't have information of your own to give away, or your information is sensitive or confidential, find someone else's to sponsor; you will both benefit in the process. If you create great information for others but can't afford to do it for nothing, find a sponsor; everyone, again, wins. In either case, don't neglect your own community. ♦

Furniture Shopping in North Carolina

John Ellis is working with both Carol Blake of USA CityLink and Kevin Altis of CityNet to encourage local businesses in his home state of North Carolina to sponsor local content on the Internet. A business-school professor on the side, Ellis's experience is showing the scope of local entrepreneurship on the Web.

Ellis provides much of the content himself—calendars of events, museum schedules, restaurant listings, and the like. He is inspired by the real-time capabilities of the Net and recalls his disappointment when, on a recent visit to South Carolina, a travel agency sent him brochures about Savannah that were half a year old and so failed to identify the parkbenches on which scenes for the movie *Forrest Gump* were shot. The Internet makes it possible to keep local information up to date, said Ellis from his home in Hickory.



Ellis has already signed up several local businesses, creating Web presences for them using server space provided by Interpath, North Carolina's largest Internet provider. He is targeting furniture retailers, the visible, high-margin businesses that tourists and outsiders are most interested in. Currently, he has half a dozen furniture stores lined up to sponsor community content, as well as a Volvo dealership, a carpet company, and the Hickory Crawdads, a minor league baseball team (see figure).

Another tack Ellis is taking is to create listings of local hotels and restaurants for free, then to charge the

various businesses to develop their Internet presence. Ellis's work can be seen at the page for the Myrtle Beach Canadian-American Days festival, <http://www.hickory.nc.us/ncnetworks/mb-intr.html>. ◆

Learning About the Web—On the Web

At the current rate of expansion of Web resources—the number of URLs tracked by Lycos, the Carnegie-Mellon search engine, increased from under 1.65 million to over 1.75 million in the past month—the Web is becoming (among other things) a “meta-forum,” a superb source of information about itself.

Teach Yourself HTML

Say you want to teach yourself HTML, the Hypertext Markup Language, and create your own Web pages. In addition to Kevin Savetz's tutorial (see page 10), you can read the “Beginner's guide to HTML” (<http://www.ncsa.uiuc.edu/demoweb/html-primer.html>), “An Introduction to HTML” (<http://www.utirc.utoronto.ca/HTMLdocs/NewHTML/htmlindex.html>), “How to Write HTML Files” (<http://www.ucc.ie/info/net/htmlidoc.html>), or one of the many guides you can link to from <http://www.w3.org/>.

Statistical Surveys

Two new surveys of Web usage—neither official nor conclusive, but both informative nonetheless—can help you pinpoint your markets and plan the content you make available on the Web. For a study from the University of Michigan business school, see <http://www.umich.edu/~sgupta/conres.html>. For a pre-Netscape browser usage and demographics study by Georgia Tech, see http://www.gatech.edu/gvu/user_surveys/User_Survey_Home.html.

Learning about the Web's Future

The next version of HTML will support tables, equations, and advanced control of styles. You can read about it at <http://www.w3.org/hypertext/WWW/MarkUp/MarkUp.html>.

For an update on work toward a “new generation” version of http (Hypertext Transmission Protocol), which overcomes the performance problems of the existing protocol, see <http://www.w3.org/hypertext/WWW/Protocols/HTTP-NG/http-ng-status.html>. You can read the specification for SSL, Netscape's own “open security standard,” at <http://www.mcom.com/info/SSL.html>. ◆

For the Web, It's Showtime:

Optimism Prevails at First Web World

Editor's note: A new conference of interest to business users, Web World, was held the first few days of February in Orlando, Fla. The mood was upbeat and the lessons unambiguous: the Web is currently an ideal marketing vehicle, and electronic commerce is coming. Here are some impressions of Web World by contributing editor Rosalind Resnick.

ORLANDO—Nearly 600 people traveled from as far away as Iceland to listen to dozens of Internet marketers, software developers, and strategists hold forth about everything from home-page design to emerging HTML standards. In fact, so many people tried to cram into the auditorium where Netscape developer Marc Andreessen was giving the keynote address that fire marshalls had to shoo late-comers away (see Andreessen interview, page 5).

For many Web World participants, the bottom line was money—how to use the Internet's World Wide Web hypermedia system to sell and market products and services electronically. Attendees typed and scribbled furiously as Andreessen and other Web celebrities predicted turbo-charged growth, and both registrants and speakers acted as if the only thing stopping Web commerce from blasting off was the lack of Secure HTTP on every server.



In his address on the conference's opening day, Andreessen, the whiz kid programmer who spear-

For many Web World participants, the bottom line was money—how to use the Internet's World Wide Web hypermedia system to sell and market products and services electronically.

headed the development of the Mosaic browser at the National Center for Supercomputing Applications, sounded a surprisingly conciliatory note in his speech after ruffling feathers last year by introducing extensions to Hypertext Markup Language (HTML) that work only with his company's Netscape Navigator browser.

In his speech, Andreessen pledged to support the forthcoming HTML 3.0 standard and to work closely with the HTML standards committee, that is, the World

Wide Web Consortium. (Andreessen can afford to be cooperative now that Netscape has 2 million users and an 80 percent share of the PC browser market. See the February newsletter, page 1, for more statistics and an analysis of Netscape's success.)

Andreessen predicted that the number of Web servers would grow five-fold—from 20,000 to 100,000—by the end of the year. He also predicted that the number of Web users would swell to 10 million by 1996.



As expected, there was plenty of talk about credit-card security, reflecting technologists' hope that making the Internet safer for credit-card transactions will transform the network from a retailing backwater to the Home Shopping Network of cyberspace. Jay Tenenbaum of Enterprise Integration Technologies touted CommerceNet, the government-backed consortium of some 80 companies that is researching the technologies that will make it possible for merchants to confidently peddle everything from \$1 software to parts-locating services.



Web World's smallish exhibit hall was packed with companies peddling HTML editors and conversion programs. In one of the sessions devoted to the mechanics of making Web pages, Eric Severson of Avalanche/Interleaf showed how SGML (Structured Generalized Markup Language) and HTML can fit together. (HTML, the Hypertext Markup Language, used in Web design, is a subset of SGML.)

While everybody wants the Web (and HTML) to be simple to use, Severson noted, different companies and businesses have specific applications in mind that require far more flexibility than HTML can offer today. The answer, Severson proposed, is not to treat HTML as a competitor of SGML but as "a really smart use of SGML, taking advantage of SGML's flexibility without giving up a common ... structure that any browser can readily interpret."



Another popular topic was building an Internet presence—and many of the marketing experts who spoke offered tips and tricks for building Web sites that draw crowds and keep them coming back for more. (Not every expert was willing to share information

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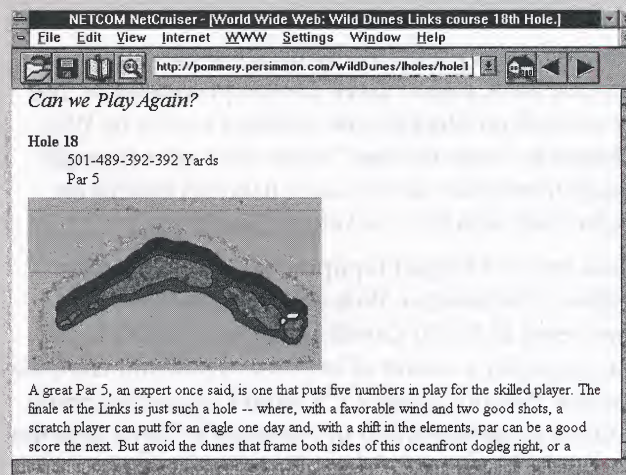
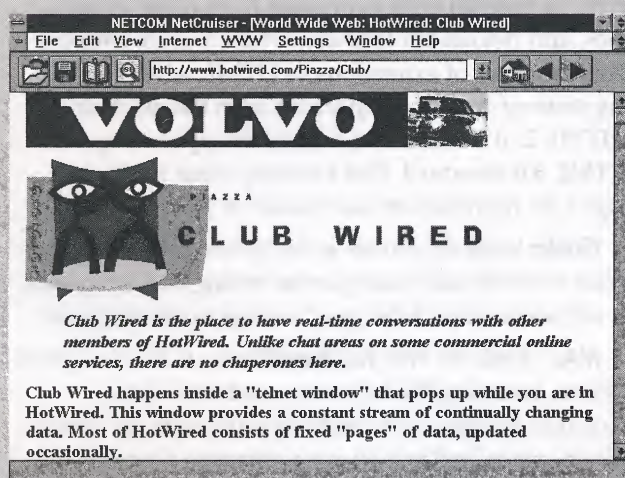
Web Success: HotWired Hits JackPot

At least one business is making megabucks on the Web—HotWired, the online spinoff of *Wired* magazine. HotWired isn't making money by peddling magazines. It's making money the old-fashioned way—by selling high-priced advertising to deep-pocketed sponsors and delivering a lucrative segment of the market.

The Web-based magazine, which debuted last October, has attracted 16 advertisers ranging from AT&T to Volvo. Each advertiser pays \$30,000 for the right to hoist its sponsorship banner over a HotWired editorial department for three months. Assuming that all 16 sponsors renew (and that's not an unreasonable bet considering that 12 of the publication's 16 sponsors have renewed already), HotWired will generate gross revenues of close to \$2 million this year.

How does HotWired do it? By combining "content and community," gathering talented writers and artists and techno-savvy readers around the "information campfire," and giving them a place to hang out on the Net, said Jonathan Steuer, one of HotWired's originators, who spoke at Web World.

This means hiring 25 online staffers to interact with readers, hiring a top design firm to create a signature look and feel, creating custom editorial content (as opposed to "shovelware"), and using the online medium to display multimedia artwork and all kinds of other cool stuff. HotWired has over 90,000 subscribers and its Web site is getting



Web Success: Wild Dunes

Marketer Carol Bates (p. 1) talks about "first-tier" marketing on the Web; technologist Karl Schlatter talks about "top-level" marketing. Both seem to mean pretty much the same thing: the creation of a "common environment for the pursuit of common interests," says Schlatter, VP of the Persimmon IT technology consulting firm. Persimmon's Wild Dunes Web site is not just a glorified billboard for the fancy South Carolina golf resort.

The site's goal is to become an info mecca for serious golfers, and will eventually carry high-price ads of golfing-equipment manufacturers. Golfers will be able to get in touch with sports instructors, visit the Pro shop, and read about tennis courts and the yachting harbor. They will also be able to view and rent vacation property, book conference space, browse travel guides, and make flight arrangements. The beta site receives 100,000 hits a month, says Schlatter, and you can see it at <http://www.persimmon.com/WildDunes/>. There, you can view the Wild Dunes golf course hole-by-hole, viewing both maps and photos.

Eventually, you'll be able to do play golf online with others around the world and keep score electronically—when the technology gets better. For now, you can play a mock game based on your answers to trivia questions. From the site you can access a clickable map of South Carolina's Web servers, and plan a complete vacation to the Palmetto State. ♦

Web World . . .

(continued from page 6)

about the results generated by his strategies, however.) Computer book author Dave Taylor, proprietor of The Internet Mall on Mecklerweb, advised would-be Web marketers to "raise the flag" about their sites through postings to relevant newsgroups lists and notices on popular Web sites like the What's New page.

Russ Jones of Digital Equipment Corp. served up examples of innovative Web sites such as the Wild Dunes resort in South Carolina that lets visitors to its home page play a round of interactive golf and compete for prizes. (See box, page 7.) "I would argue that brand identity is more important in cyberspace than it is in the real world," Jones said. "If you have an identity, reinforce it on the Web."

David Reske of Open Computer Market, a Southboro, Mass.-based cybermall that specializes in computer hardware and software (and did a bustling business signing up registrants for Web World), offered an analysis of why Internet shopping has thus far failed to take off.

The way Reske sees it, it's not just lack of credit-card security that's holding back Net commerce—it's fundamental problems like the poor selection of products and services for sale, the difficulty of using the software and navigating the sites, an impersonal environment, and poor value. "It's not good enough to enable transactions," Reske said. "You have to enable shopping."



For now, the Web is clearly far better for marketing than sales. In a year, at Winter Web World 1996, it would be useful to see a panel composed of companies that rang up sales of \$1 million or more on the Internet in 1995. ♦

Netscape's Andreessen Downplays Competition, Supports Standards

Marc Andreessen conceived of Mosaic at the University of Illinois at Champaign in 1992, while still an undergraduate, and helped develop the software in early 1993. He was a founder of Netscape Communications Corp. in Mountain View, Calif., in 1994, and is currently Netscape's Vice President of Technology.

The Netscape browser (see the February newsletter, page 1) has since its introduction in October both made the Web a Windows phenomenon and shown vendors much bigger than Netscape that a huge market is in the making. Here are Andreessen's thoughts about some major issues confronting business users of the World Wide Web.

Guide: Netscape is arguably the Web's most popular browser. How will Microsoft's licensing of Mosaic from Spyglass change this?

MA: It's totally unclear. Users today are finding Netscape to be far superior to anything Spyglass has to offer, but I very much doubt that whatever comes with Windows 95 will have any similarity to anything Spyglass is shipping. I think Microsoft just wanted a basic browser implementation in source code form with no strings attached to start developing from, and Spyglass was desperate enough to give it to them.

That said, the really significant thing that's happening here is that Microsoft will be making it much easier for ordinary PC users to get on the Internet than ever before, which is great for the entire industry.

Guide: These days, it seems as if there's a new Web browser introduced practically every day. What standards, if any, do you see emerging in HTML and the Web browser software category? What assistance or cooperation will Netscape provide in setting and adhering to those standards?

MA: We see a wide range of standards emerging, including HTML 3.0 and 4.0, a next-generation HTTP, security standards, and other standards.

Netscape is a founding member of W3C, the Web standards body, and is participating in all of these areas—particularly security, where we have donated our Secure Sockets Layer (SSL) security proposal to W3C in parallel with proposals from other companies, and document formats, where we are proposing a number of extensions to HTML while providing state-of-the-art support for both the existing (HTML 2.0) standard as well as the upcoming HTML 3.0 standard. [See *Learning about the Web* on page 5 for references on new standards.]

Guide: What do you see as the future of the World Wide Web? Should businesses be betting on it long term, or will some other "killer app" emerge to take its place?

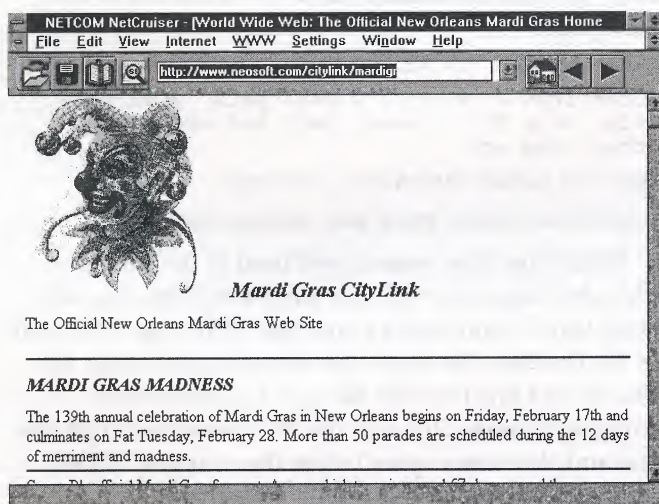
MA: I think the Web has the potential to be a long-term success, assuming the technology and underlying protocols, formats, and standards evolve quickly enough. We are committed to delivering commercial-grade, robust, high-quality, dependable software to our customers, many of whom are already betting on it long-term. ♦

Hearts . . .

(continued from page 1)

Blake's Cupid Cove site, conceived by Blake and designed by New Media in Atlanta, is full of Valentine ideas. Some of the ideas are free, such as the poem it unromantically makes available—"Simply e-mail your would-be-Valentine and point them to this URL." Also free is the "Internet Valentine Day's Coupon," which includes a coupon for a "surf-free" night sure to please spouses of Net addicts (see figure on page 1).

You have to hunt a bit to find the businesses being marketed at Cupid's Cove. That's the principle of first-tier marketing, Blake says, people don't want to see business pages; they want fun, information, or both. Cupid's Cove links to other marketing sites on the Net, including several malls representing stores that sell choice Valentine goodies. The Virtual Tunnel of Love



links to the Colorado-based Flower Stop, a full-service Internet florist created by AcmeWeb services (<http://www.flowerstop.com/fstop>). Cupid's Cove also links to New York City's eMall (<http://www.eMall.com/Home.html>), where you can buy romantic CDs and—hot spices. And it links to Ann Arbor-based Branch Mall, from whose site you can order chocolates from a store in Massachusetts.

For "little loved ones" Blake & Associates has assembled a list of children's books, such as *Winnie the Pooh's Valentine* and *The Valentine Cat*.

Finally, for the Valentine-less, there's a link to the Web Personals page created by Internet Media Services Inc., a Web services company based in San Francisco that helps companies generate sales leads, recruit employees, launch products, and do other creative things over the World Wide Web.

What's next from the innovative people at Blake & Associates? Try the Mardi Gras link (<http://www.NeoSoft.com/citylink/mardigr/default.html>), complete with a directory of places to stay, a message from the mayor, a schedule of parades, a Mardi Gras dictionary, and Virtual Bourbon Street (see figure on this page). Carol Blake, a marketing veteran but relative newcomer to the Net, says she got her start in Internet marketing trying to sell king cakes, a Mardi Gras specialty, on the Net. Her marketing efforts generate leads and business for clients, she says, but she's yet to sell a single king cake. Carol Blake complains that even the Internet-savvy are reluctant to shop online. It's fun, she says, and it *will* pay, she insists.

Blake has several first-tier marketing projects in the works. For more information about Blake & Associates, send e-mail to blake@neosoft.com or call 504-898-2158. ♦

Web Has New Center

CERN, Geneva's European Particle Physics Laboratory, best known as the place where the World Wide Web was conceived and nurtured, was in fact created to carry out an entirely different mission—high-energy physics research. In December, CERN received funding to undertake the first phase of a major collider project, currently its top priority. Shortly thereafter CERN asked France's leading computer-research institute, INRIA, which has a long history of doing basic software development, to take over the work CERN has been conducting on core Web software. INRIA immediately agreed. (See the new entry in Tab 1100 on INRIA.)

With its new WWW responsibilities, INRIA, which has funding from the European Commission, is expected to work closely with the World Wide Web Consortium (W3C), which is based at MIT and directed by Tim Berners-Lee, a creator of the Web and former CERN scientist. The W3C has the support of key vendors, such as Netscape.

If INRIA and W3C can work together, business users can expect concerted work toward single worldwide standards for both http and HTML, heading off the development of both vendor-driven standards and separate standards for Europe and the U.S., whose fragmenting effects some analysts have anticipated. They can also look for a new and even better-maintained home for the superb Web information available at <http://info.cern.ch>, for a long time the World Wide Web's most-distinguished and most-frequented address. ♦

HTML (Part I): The Elements

By Kevin Savetz*

So you're ready to create your own World Wide Web page—a masterpiece of audio and visual delights to market your product and win new customers. The only thing between you and your own storefront on the Internet is something called HTML, the Hypertext Markup Language.

HTML is simply a set of commands for placing elements on a “page,” or document, the unit of infor-

**This is the first of three articles on HTML. The next article will introduce the advanced features of HTML. The final article looks at style issues. The author, Kevin Savetz, is taking time off from his Help Desk column to write the series. You can visit his personal home page at <http://www.northcoast.com/~savetz/savetz.html>.*

mation on the Web. Despite what the ads for big books and expensive online storefronts will tell you, learning HTML is relatively painless, if you are willing to roll up your sleeves and experiment a little.

What You Need

To create HTML files, all you need is a basic text editor. Any word processor that can save files as ASCII text will do. Other programs can simplify the creation of HTML by remembering the more complex commands for you. For now, though, just load your word processor and experiment. You don't even need to be running a World Wide Web server to look at your creation. Most Web browsers (including Mosaic and Netscape) let you read an HTML file stored on your hard disk. With a Web browser, you can create pages, then test and refine them, without even going on the Web.

With HTML you specify how the elements of a “page”—headers, lists, text, and graphics, for example—will appear when viewed by someone's Web browser (“client” software). All browsers work by downloading text files marked up with HTML codes, then displaying formatted pages on the local computer. Different browsers display HTML code in slightly different ways, so it's a good idea to test pages using as many browsers as possible. The page itself is situated on the World Wide Web “server” maintained by you or your access provider. (See Sections 960 and 1050 on Web client and server software, respectively.)

Note that Web browsers often let users set the default type size, style, and color. See the figure for a representation of the finished page the user sees.

Basic Text

HTML uses formatting codes, called *tags*, to define the appearance of document elements. Tags always go within angle brackets: `<>`. For instance, to create a line of large headline text (a “first-level header”), we use the `<h1>` tag to turn on the tag:

```
<h1>Welcome to Arlo's Rare Pet Store</h1>
```

A forward slash (/) turns the tag off, so `</h1>` turns off the headline text. HTML provides us with a variety of headline sizes, from `<h1>` (really big) to `<h6>` (really small). Text that isn't tagged is treated as plain old body text, the on-screen equivalent of the text in this paragraph.

```
<h1>Welcome to Arlo's Rare Pet Store</h1>
```

```
Greetings from Arlo's Rare pets, your one-
stop shop for unusual pets and everything
they need.<p>
```

```
We now offer overnight delivery.
```

```
<h2>Everything your pet needs</h2>
```

Notice the three sizes of text used in the example: `<h1>` for large text, `<h2>` for almost-as-large text, and body text. If Arlo forgot to use the `</h1>` tag at the end of the first line, the body text would appear huge, too. The second line includes the `<p>` tag, the end-of-paragraph mark. This tells the Web browser to end the line and skip some space before the next line. HTML normally ignores “white space” (returns, spaces and tabs in your file), so the code:

```
Make
yourself
at
home.
```

appears as “Make yourself at home.” Why are there no `<p>` tags after the `</h1>` and before the `<h2>`? You've just discovered one of HTML's idiosyncrasies: you don't need to use a paragraph mark right before a headline size change. (You can include it, but things look better if you don't. Try it both ways.)

There are many ways to tweak text, including tags for `bold text` and `<i>italic text</i>` and `<u>underlined text</u>` and a `<tt>monospace “type-writer” font</tt>`. Those are all “physical styles”—HTML allows you to specify text appearance in two ways: physically (by explicitly specifying the style you

want, such as italics, boldface, or underline) and logically (by the logical meaning of the text you wish to mark), such as `emphasis` and `strong emphasis`. It's considered better to use logical style tags rather than physical ones, because logical tags are more consistently interpreted from browser to browser.

You'll notice that you don't have a lot of control over how text appears. If you're accustomed to using a word processor in which you can choose from umpteen fonts, styles, and point sizes, HTML can seem pretty limiting. HTML was designed to work across many platforms, to give the reader, rather than the publisher, control over how things appear. This is slowly changing, but for now the control an HTML publisher can exert is limited.

Lists

HTML offers a variety of tools for presenting lists of information, including numbered lists, unnumbered lists, and "glossary" lists. For instance,

```
<h2>Everything your pet needs</h2>
<ul>
<li>fresh food
<li>identity tag
<li>every make of collar, leash, and cages
</ul>
```

will create an *unordered* list, using bullets—or nothing, depending on browser—instead of numbers to separate the items. By changing the UL tags to OL tags, we can make an *ordered*, or numbered, list. Notice that the browser automatically numbers the items, making it painless to add, move or remove list items. Some browsers also let you specify the type of number or ordering device displayed, such as Roman numerals (I, II, III) or letters (A, B, C).

```
<h2>Why choose Arlo's?</h2>
<ol>
<li>one-stop, point-and-click shopping
<li>highest customer-satisfaction level on
the Internet
<li>refund guaranteed if you're not abso-
lutely satisfied
</ol>
```

Another type of list, the glossary, or *definition list* (dl), is useful for creating items with subelements. For instance, the HTML code:

```
<h2>Now in stock</h2>
<dl>
<dt>Felines
<dd>Siberian tigers
[etc.]
</dl>
```

Welcome to Arlo's Rare Pet Store

Greetings from Arlo's pets, your one-stop shop for unusual pets and everything they need.

We now offer free overnight delivery.

Everything your pet needs

fresh food
identity tag
every make of collar, leash, and cage

Why choose Arlo's?

1. one-stop, point-and-click shopping
2. highest customer-satisfaction level on the Internet
3. refund guaranteed if you're not absolutely satisfied

Now in stock

Felines
Siberian tigers
Reptiles
Chameleons
Alligators
Iguanas

See us on the Net or at [our Peoria store](#)

Images

Of course, you can also place images in your Web page. The IMG tag allows an image to be inserted within a document. The easiest way to include an image is to put a GIF-format graphic in the same directory as your HTML code, then use a line like: ``. This tells the Web browser to place an image called filename.gif on the page, and make the next text or picture align with the bottom of the picture.

Using the tag `` aligns the image with the preceding element.

In addition to these "inline graphics," you can also make available graphics that a user can download as separate files by clicking on a highlighted link.

Linking is at the heart of HTML. The figure shows a sample link created with the following code:

```
<a href="http://www.arlo.com/
store.html">our Peoria store</a>
```

The next article in this series covers linking to other Web pages, and introduces you to selected, more advanced, aspects of HTML. ♦

Calendar

Marketing on the Internet. Mar. 2-3 (Boston); March 6-7 (New York); March 9-10 (Washington, D.C.). Presented by Target Marketing of Santa Barbara, sponsored by Sun Microsystems. Information: call 800-549-4659 or send e-mail to staff@targeting.com.

GroupWare 95. March 5-8. Boston, Mass. Information: call 800-247-0262.

Law of Electronic Commerce. Starting March 13 and May 9 (each forum is 30 days). Information: call 800-466-4595 or 717-258-1816, or send e-mail to bwrigh01@reach.com. An online (Internet) seminar conducted by attorney Benjamin Wright, sponsored by First Virtual, and organized by the National Computer Security Association. An online forum running for 30 days devoted to the legal aspects of electronic contracts, EDI, electronic signatures, and e-mail privacy.

Publishing, Marketing, and Advertising on the Internet. March 20-22. Presented by Telestrategies. Information: call 703-734-7050.

Spring Internet World. April 10-13. San Jose, Calif. Information: call 800-632-5537 or send e-mail to iwconf@mecklermedia.com.

Network World Unplugged. April 11-13. New York, N.Y. Information: call Marli Hoyt at IDG World Expo (800-225-4698 or 508-879-6700).

Third International World Wide Web Conference. April 10-14. Fraunhofer Institute for Computer Graphics, Darmstadt, Germany. In English. Information: go to <http://www.igd.fhg.de/www95.html>.

WebWorld '95. April 19 - 21. Santa Clara Convention Center, Santa Clara, Calif. Organized by: Digital Consulting Inc. Information: send e-mail to SEMINAR@dc-inc.com, go to <http://199.232.60.132/DCI/>, or call 508-470-3880.

AusWeb95, the First Australian WWW Conference. April 29 to May 2. Ballina Beach Resort, Ballina, New South Wales, Australia. Information: go to <http://www.scu.edu.au/ausweb95/index.html> or send e-mail to sdaley@scu.edu.au (Sheridan Daley).

INET 95—The Internet: Toward Global Information Infrastructure. June 26-30. Honolulu, Hawaii. Information: send e-mail to inet95@isoc.org. Internet Society's 5th annual convention.

First Annual Conference on Telecommunications and Information Markets (COTIM-1995). Nov. 5-8. Newport, Rhode Island. Information: send e-mail to Dr. Ruby Roy Dholokia at ruby@uriacc.uri.edu or David Fortin at dfor8320@uriacc.uri.edu, or call RITIM (Research Institute for Telecommunications and Information Marketing), University of Rhode Island, at 1-401-792-5065. ■

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